

SCOPE OF WORK
REPAIR /CORRECT ELECTRICAL DEFICIENCIES

534-14-104

7/8/2013

I. **SUMMARY OF SERVICES REQUIRED:** Provide the Design Services listed below. They are summarized here to provide an overview; detailed requirements follow in this document. The Scope of the Construction is provided at the end of this document. The summary of services required includes but, is not limited to:

- a. Site visits, all necessary field investigations
- b. The preparation of design and design documentation including Schematic Design, Preliminary Design, Design Development, and final Construction Documents, including construction drawings, specifications, cost estimates, analysis and narratives as summarized here and described at the end of this attachment, expanded upon in Handbook H-08-15, Volume B, Minimum Requirements for A/E Submissions, and other guidelines that make up this contract. Construction documents will become part of the construction contract and shall be sufficient to support competitive bidding.
- c. Bidding and Negotiation support, as required, to explain and clarify the A/E's work during the Bidding and Negotiation process. Actual Bidding and Negotiation will be accomplished by the Department of Veterans Affairs.
- d. The reproduction of review documents and construction documents are to be included as part of this contract.
- e. Construction Period Services Support as required to verify compliance with the designer's intent, both during the submittal process and during actual construction, and to document variances from the original construction documents. The Department of Veterans Affairs will administer the actual construction.
- f. Post Construction Services will be required to 1) update the original construction documents to reflect changes and unforeseen conditions encountered during construction (Record Drawings) and 2) to incorporate the updated construction documents into the facilities master drawing documentation (As-Builts).

II. **THE FACILITY** at which the work will be performed is the Ralph H Johnson VA Medical Center located at 109 Bee St., Charleston, SC 29401.

III. **GUIDE SPECIFICATIONS:** The A/E shall use the VA Master Specifications available from www.va.gov/facmgt/standard. The VA will provide guidance to the Web site.

IV. **PLOTTING REQUIREMENTS:** All Construction Document Drawings will be plotted onto 30 x 42 inch reproducible bond vellum, or 4-mil Mylar, with border lines @ 28x40 inches. Refer to the locally available VAMC Charleston AutoCAD Guidelines, www.va.gov/facmgt/standard/cpro/cp_top02.doc, and related documents for additional

information and guidance. See elsewhere in this document additional drawing format requirements.

V. **DRAWING DISTRIBUTION:** Once the 100% design has been reviewed and approved, and the cover sheet signed, the A/E shall deliver the original **Construction Document Drawings, Specifications, Computer Disks** (Construction Document Drawings & Specifications), **Cost Estimates, Narratives**, and reproduced documents to the Chief, Engineering Service as one package. The cost of the drawing material, computer disks, reproduction of the design review submittals, specifications, reports, and cost estimates will be included in this contract.

VI. **CAD TEMPLATES:** The A/E will utilize the Charleston VAMC provided AutoCAD Cover Sheet drawing (**VA-COVER.DWG**), Title Block drawing (**VABORDER.DWG**), Finish Schedule drawing (**FINISH.DWG**) and the Signage Schedule drawing (**SIGNSCH.DWG**) for the project drawings. The Cover Sheet includes an area for the signature of the Medical Center Director/Assistant/Associate, Chief of Staff, Engineering Service, Energy Manager, IH/Safety/Infection Control, and Service Chiefs involved; an index of the drawings; and "key" drawing. General notes and other pertinent items will be provided by the A/E on the cover sheet.

VII. **DRAWING FORMATS:** The A/E will utilize copies of the current version of AutoCAD As-Built plans as listed in the **Engineering Service AutoCAD Guideline Index**. The A/E may utilize copies of the VA Record Drawings as may be available and relevant to this work.

VIII. **CAD REQUIREMENTS:** Computer-Aided Design (AutoCAD) Management Requirements:

- a. The A/E will follow the Charleston VAMC Engineering Service AutoCAD Guidelines in the development of the Project Construction Drawing Documents, Record Drawing Documents and As-Built modifications. In particular, the following sections apply:
 - 1) Section B: Engineering Service AutoCAD Project Requirements for Architects/Engineers.
 - 2) Section C: Group No. 1 Plotting Configurations
 - 3) Section E: Plot Configuration Parameters (PCP).
- b. Guidelines are available electronically from this Medical Center.

IX. **DESIGN CRITERIA:** The A/E will use the criteria in the Facilities Management Technical Information Library as the basis for the design and its development for this project. This library may be found at www.va.gov/facmgt/standard/. www.cfm.va.gov/til/cpro.asp The VA criteria listed below are available at this library unless originating in the Public domain or indicated to be locally available. These criteria are common to most work but shall not be considered as all-inclusive and shall be applied as appropriate to the specific project design. Variances and Requirements for additional technical or design guidance shall be addressed to the Contracting Officer's Technical Representative.

- a. Listing of Design Criteria for Project Design Program:

VAMC Policy Memorandum www.va.gov/facmgt
VA Master Construction Specifications
VA Construction Standards
VA Architectural Standards
VA Mechanical Standards
VA Electrical Standards
Electrical Design Criteria

VA Equipment Guide List
 Hardware (Equipment) Symbols
 Seismic Requirements
 VA Planning Criteria
 Barrier Free Design Handbook
 Uniform Federal Accessibility/Standards/ADA / UFAS
 VA Signage Standards (format available) Local Memo 137-7
 VA Interior Finish Standards Local Memo 138.13
 VAMC Interior Design Standards Local Memo 138.13
 VA HVAC/Plumbing Design Criteria
 VA Industrial Hygienist Requirements
 JCAHO Criteria
 Uniform Building Code/International Code
 NFPA Life Safety Codes
 Energy Code (Lighting & HVAC) ASHRAE/IES
 Standard 90.1 (DOE Federal Energy Standard 10 CFR Part 435)
 Engineering Service AutoCAD Requirements
 VA Handbook 7610 – Space Planning Criteria
 VA Fire Protection Design Manual
 Infection Control Risk Assessment (memo 138-03-A-1)

- b. Compliance with all known applicable codes, including VA criteria, standards & guidelines, will be reflected in the completed design documents. Conflicting criteria shall be brought to the attention of the Chief of Engineering Service for resolution. Typically the most stringent criteria will apply. Codes used by the VA are listed at <http://www.cfm.va.gov/TIL/cpro/cpTop01.pdf>. The primary focus is typically the Life Safety Code; the Uniform Building Code is still noted as the VA model building code.

X. AVAILABLE INFORMATION: Facility Information (As Builts, Record Drawings, etc.), which may be on file at the Medical Center is available to the A/E for his information and use by arrangement with the Project Staff Engineer at the Medical Center.

- a. Copies of these documents may be obtained by written request to the Project Staff Engineer (72 hours notice should be allowed for Charleston VAMC, Engineering Service to respond to a request). Documents which do not pertain to the specific task order shall not be supplied without proper justification. The A/E should arrange to review what relevant information may be available and then make separate arrangements for its reproduction. The VAMC (or the A/E using VAMC equipment and materials) will provide limited copies of information on file (up to 20 sheets of drawings) at no charge. Reproduction beyond that shall be arranged by the A/E at his expense.
- b. Available project information based on VAMC approved submittal data:
 - 1) Record drawings of existing related construction, site, & adjoining buildings
 - 2) As-Built Drawings (Original and AutoCAD versions) of most recent major renovations

XI. DETAILED SCOPE OF A/E SERVICES to be provided shall be as stated at the beginning of this attachment and as follows:

- a. DESIGN PERIOD AND CONSTRUCTION PERIOD SERVICES

1) PRE-DESIGN SERVICES

1.1) FIELD WORK:

Field work by the A/E shall be scheduled in advance with the Medical Center. The A/E will be required to coordinate with any clinical programs and schedules and to fully respect patient and staff privacy.

The A/E may expect full and free access to public, common, and building service areas during normal business hours. Access to departmental and clinical areas may be limited, may require escort, and shall be coordinated in advance through Engineering Service. A Medical Center escort cannot be provided at all times. Escorts will be required when working in sensitive areas and must be coordinated in advance of the requirement. The A/E will be provided Identification that must be displayed when working unescorted.

After-hours access will be arranged only when mutually convenient with both the A/E and the Medical Center. Normal business hours are 7:30 AM until 4:30 PM, Monday through Friday, excluding Federal Holidays. Local exceptions exist in many departments.

Access will be provided to all available facility documentation. Drawing documentation (electronic and hard copy) is reasonably complete except for work in progress. Prior Reports and Analysis are scattered and often dated. Prior coordination and scheduling will be required for access to all information sources.

1.2) CODES AND ANALYSIS REQUIREMENTS:

The primary code in use at the VAMC is the most current edition of NFPA 101, Life Safety Code. The Uniform Building Code remains the Code of Record for the VA though seldom referenced. Other codes shall be as listed above and found at <http://www.cfm.va.gov/TIL/cpro/cpTop01.pdf>

- 2) DESIGN SERVICES (General Requirements). Provide A/E Design Services including Field Investigation, and Design (Conceptual 15%, Schematic 35%, and Design Development 60%) as may be required and Contract Document Preparation 100%. These services for each phase shall include but not be limited to:

2.1) SURVEYS AND TESTING:

The A/E will assess any suspected hazardous materials by reviewing prior surveys and verifying with spot tests. The Environmental Engineer and testing lab shall be approved by the VAMC prior to the start of this phase of the work.

2.2) PROGRAMMING:

The VA will provide the general direction and intent of the work. The A/E will review this material, verify field conditions and offer alternate methods of accomplishing the intent within the Government's constraints.

2.3) FIELD INVESTIGATION:

Perform all site visits, field investigations, as built verification and existing condition verification necessary for execution of the design and preparation of construction documents. As built and existing condition information provided to the A/E is not guaranteed to be error free. The A/E is expected to become reasonably familiar with the area of the work.

2.4) DESIGN INTERVIEWS AND CONFERENCES:

Provide all visits and conferences necessary for the A/E to verify the interests of concerned parties are being addressed. Allow time to resolve issues resulting from the design during bidding and construction.

2.5) DESIGN SUBMITTAL REVIEWS

The A/E will be required to make presentations of each submission on site. The A/E will be required to meet with the Medical Center after each submission to review his work with the Medical Center, clarify questions regarding his work and receive comments and discuss any concerns arising out of the review. He may expect to discuss his work and receive comments for a period not to exceed four hours at each submission.

3) DESIGN SERVICES SPECIFIC REQUIREMENTS

3.1) DESIGN DEVELOPMENT – Conceptual/Schematic Design (DD1)

Submission: Provide conceptual data to locate and describe the intended design, highlight available options with the design, verify existing conditions, and to establish the dialogue with the Medical Center necessary for developing a design. Material shall be suitable for discussing various options and/or limitations that might be present in the work. A/E Provides a submittal of investigation findings and recommendations, 7 copies. Submittal will include:

- 3.1.1) Building plans showing and locating the areas and the extent of the work, including paths of access including material delivery and removal, limits of work (partitions) and significant constraints to the work (ex., such as ongoing medical staff work and patient care in portions of 1AS and 1AN) and including areas that move to a different floor area during an early project phase (ex., EENT Clinic to go to vacated red team space).
- 3.1.2) Sketches of design concepts showing suggested overall layouts (ex., rough layout of Electrical/IT rooms including initial suggestions and locations of supporting spaces) and more detailed (larger scale or more precise detail) for work of a complex or controversial nature. Detailed sketches of routine work are not required.
- 3.1.3) A broad projection of costs and an outline of trades and services to be considered in future detailed cost estimates.
- 3.1.4) Construction coordination issues and Management Plan that may be

needed to maintain operations during construction. This will be developed jointly with Medical Center Personnel and prepared and presented by the A/E. It shall include the following: patient circulation; utility/other outages; material handling and lay down; customer flow issues and solution recommendations; project construction phasing and durations; construction period testing/inspection requirements; construction route for material delivery and removal; impact of utility system demo/relocation on other floor(s). Utilize sketches developed in 3.1.2 when applicable to communicate and aid discussions.

- 3.1.5) Neat, legible, freehand, single lines, to scale drawings are acceptable at this stage. Reproducible or electronic files of any drawings or narratives shall be submitted. Refer to Program Guide, PG-18-15, Volume C, May 2006 for submission requirements for Schematics, DD, and CD.
- 3.1.6) Color schemes and interior finishes, with recommendations.
- 3.1.7) Results of Infection Control Risk Assessment as referenced in Center Policy Memorandum No. 138-03-ATTACHMENT A-1.
- 3.1.8) Provide 7 copies of bound design analysis and subsequent narrative for the disciplines as follows:
 - Architectural narrative includes location, access, site impact, interior layout and design, and any phasing information Phasing may be required may be required for the project.
 - Mechanical narrative includes air distribution /conditioning requirements for each typical room, equipment locations and controls. **Discuss the present state of HVAC in electrical closets and IT rooms. Exhaust systems shall be evaluated to ensure the ability to exhaust areas in accordance with current criteria of space/use requirements.**
 - Electrical narrative includes normal power, emergency power, computer network/telecommunications; **it will also be necessary to relocate and resize accordingly the tele-communication (IT) and electrical rooms to meet NFPA 110. Provide working clearance in front of any equipment that may require examination, adjustment servicing, or maintenance while energized in compliance with NEC sections 110.26 and 110.34. Provide additional Normal Power to ICU. Provide sufficient access and working space around all equipment servicing 600 Volts or less, IAW OSHA (29CFR 1910.303(g))**
 - Plumbing narrative includes domestic water, sewer drains, medical gases, and fire protection **incidental to the expansion of electrical/IT closets** Utilize existing vent risers and waste water where available and verify adequate supply. Remove abandoned piping in conflict and provide new piping to point of tie in.
- 3.1.9) Presentation of findings above, to the Medical Center, on site.

3.2) DESIGN DEVELOPMENT – 35% (DD2) Submission. The A/E will develop the schematic concept through visits to the Medical Center and discussions with its staff. The submission shall be made during the early stages of design where the main features of the work are determined, but where changes can still be made with minimal effort. The A/E shall use this submission to verify and confirm the viability of the concepts previously discussed during the DD1 submittal. They shall also define the building system issues required to support the proposed design (HVAC, Electrical, etc.) Submission requires:

3.2.1) "To-scale" formal drawings of the main features of the work including the location, extent, and concepts being implemented.

3.2.2) Concepts and schematics from all disciplines required to support the design with emphasis on technical issues that may be in question or controversial.

3.2.3) Equipment and Furnishings Layouts. Demonstrate by equipment layout out drawings that the A/E's plans support the Government's intended use. Incorporate any equipment or furnishing plans that may be provided by government vendors, or use generic if specific items are not established. Specifically show layouts for new duct work and air terminal devices and any interferences above existing ceilings. If specific requirements are not available from the end user, a generic basis of design will be shown for the end user to comment on and respond to.

3.2.4) Preliminary Finish Schedule. A draft finish schedule to show the designers intent and to give the designer a frame work for discussing finishes with the Medical Center's Interior Design Coordinator.

3.2.5) Code Analysis. A summary of the code compliance rationale (thought process) used for the design shall be submitted. This shall preferably be on the drawings themselves but may be in a separate narrative if necessary. Codes being used shall be indicated for each discipline even if work for that discipline has not advanced to a state permitting code analysis. Rated assemblies will be shown graphically.

3.2.6) A refined projection of costs. A detailed, preliminary cost estimate reflecting a quantity take off including labor and materials and based on an established reference (Means, etc.). Coordinate format prior to preparation.

3.2.7) Electronic Drawing Files of key drawings and narratives.

3.2.8) Any technical analysis, product literature or evaluations used to derive the information submitted above **Provide a cooling and heating load analysis to ensure existing Electrical/IT closets have adequate ventilation and cooling.**

3.2.9) Outline specifications showing sections intended for use.

3.2.10) Reproducibles. A clean, clear copy shall be submitted of all drawings, narratives, etc. to enable the VAMC to reproduce any additional copies that it

may require beyond those required in the submission, and to permit comments to be noted and reproduced. The Charleston VAMC uses a photocopy process for reproducing drawings. Any clean, clear, vellum or bond plot generally suffices; prints generally will not satisfy this requirement.

3.2.11) SUBMISSION REQUIREMENTS: The package submitted to the VAMC shall include:

- 5 sets of full size plans, 35% complete, showing basic plan for each discipline involved, with all review comments accounted for. 5 sets of half size sets of plans, showing basic plan for each discipline involved.
- 1 copy of electronic data. This should be made accessible via PDF to all on the design team if requested.
- 5 sets of detailed construction cost estimates.
- 1 copy of suitable reproducible.
- 5 copies of marked up list of Master Construction Specifications showing sections intended or used on this project.
- 5 copies of Identification of Deductive Bid Alternates: approximating 10% of construction.
- Presentation to Medical Center, on site.

3.3) CONSTRUCTION DOCUMENTS – 65% (CD1) Submission.

3.3.1) Developed architectural drawings addressing all significant aspects of the design. Fully coordinated and detailed drawings are not expected; identification and delineation of all issues and aspects of the work for all disciplines are required. Although fully coordinated and detailed drawings are not expected and routine detailing is not yet required, for assurance of rapid turnaround at the 100% submission it would be prudent.

3.3.2) Preliminary drawings of all mechanical, electrical, and technical systems showing sources of utilities and services and distribution of all services. Scope of work should be clearly shown; significant technical problems should be addressed and resolved. Although fully coordinated and detailed drawings are not expected and routine detailing is not yet required, for assurance of rapid turnaround at the 100% submission it would be prudent.

3.3.3) Informational plan for functional user: A separate plan showing only the features significant to the end user is required. Such features might include but not be limited to floor plans showing room names and numbers, intended equipment and furnishings, power receptacles, data jacks, etc. This product is an important step in quality control and should not be omitted.

3.3.4) Any technical analysis, product literature or evaluations used to derive the information submitted above.

3.3.5) Reference to code issues or survey findings related to the work.

3.3.6) A Detailed cost estimate reflecting a quantity take off including labor and materials and based on an established reference (Means, etc.). Coordinate format prior to preparation.

3.3.7) Electronic Drawing Files of the primary drawings, narratives, and cost estimates.

3.3.8) Specification Outline updated, with marked up sections of any unusual or controversial areas only.

3.3.9) FINISHES: Verify finishes required in areas of work. Prepare finish schedule including colors and product where applicable. Provide three color boards (Interiors, Project Manager, Contractor). Work shall comply with the Medical Center's current interior design master plan and be coordinated with the Medical Center's interior design coordinator.

3.3.10) SUBMISSION REQUIREMENTS: The package submitted to the VAMC shall include:

- 12 sets of plans (7 full size, 5 half size), 65% complete, with all review comments accounted for.
- 5 sets of detailed construction cost estimates.
- 5 copies of sample edited and marked-up VA Master Specifications of each discipline and VA Master Specification Table of Contents. Include brief descriptions of project deduct alternates, in the amount of 10% of the construction estimate. Proposed construction phasing, and estimated phase durations, will also be included.
- 3 alternative Color Boards, showing all interior finishes, with recommendations.
- Presentation to the Medical Center, on site.

3.4) CONSTRUCTION DOCUMENTS – 100% (CD2) Submission. This submission shall include:

3.4.1) Completed sets of construction documents for final VAMC verification prior to final reproduction.

3.4.2) Updated Informational plan for functional user:

3.4.3) Updates to any code, technical analysis or evaluations previously submitted.

3.4.4) A Final detailed cost estimate reflecting a quantity take off including labor and materials and based on an established reference (Means, etc.).

3.4.5) The final original (Mylar) cover sheet for signatures.

3.4.6) Final complete Electronic Files. See format information elsewhere in the full copy of this attachment. Shall include plans, specifications, narratives, estimates and other key documents. To be updated at Final Submission if changes occur.

3.4.7) Updates to finishes. Highlight changes to previous submissions for the benefit of the reviewer. Update previously submitted color boards.

3.4.8) Specifications. Final edited specifications for review.

3.4.9) Reproducibles: Shall be submitted of all drawings to enable the VAMC to reproduce any additional copies required and to permit comments to be noted and reproduced.

3.4.10) SUBMISSION REQUIREMENTS: 10 copies of all documents shall be submitted except:

- 12 sets of plans (7 full size, 5 half size), with all review comments accounted for.
- 3 sets, final construction cost estimates.
- 1 copy electronic data
- 1 copy Mylar Cover required for signatures
- 1 copy Suitable Reproducible
- 5 sets complete typed specifications. They will include all comments received from legal and technical review, and VISN Fire and Safety Engineer review (if applicable).
- 2 sets submittal checklist
- 2 copies of the brief description of work for inclusion in construction solicitation.
- Deductive alternatives, in the amount of 10% of construction estimate, will be provided.
- 3 sets of color boards, to reflect all interior finishes approved by the Medical Center during CD1 submission reviews.
- Presentation to the Medical Center, on site.

3.5) Upon completion of all revisions by the A/E and final approval of the Contracting Officer, the following items shall be submitted within 10 days.

3.5.1 1 set original MYLAR reproducible plans plus a copy on CD disk in AutoCAD 2007 format (See Section B, Paragraph A.10 of the Engineering Service AutoCAD Guidelines for electronic submittals).

3.5.2 1 set complete typed reproducible specifications plus a copy on CD in current revision of Microsoft Word (See Section B, Paragraph A.10 of the Engineering Service AutoCAD Guidelines for electronic submittals).

3.5.3 3 copies of the final description of work including base bids and all deduct alternates. Each item shall have cost and time included for that item of work.

3.5.4 Upon Medical Center approval and signature of plans described in paragraph 3.5.1 above, provide:

- 25 complete sets of construction plans and specifications (bound) to the Contracting Officer. 1 half size set of construction plans (bound) to the Project Manager at the VA.
- 3 complete sets of half size drawings.
- 25 CDs, in TIF, PDF, and DOC format, containing drawings and specs as required by the contracting officer.

3.6) Construction Document Drawings will be prepared as follows:

3.6.1 All Construction Document Drawings will be plotted onto 30X42 inch, 4 mil MYLAR, with border lines @28X40 inches, and as indicated in Handbook PG-08-15, provided.

3.6.2 The A/E will utilize the VA provided AutoCAD Cover Sheet Drawing (VA-COVER.DWG), Title Block Drawing (VABORDER.DWG), Finish Schedule Drawing (FINISH.DWG) and the Signage Schedule Drawing (SIGNSCH.DWG) for the project drawings. The Cover Sheet includes an area for the signature of the Medical Center Director, Facilities Service Line Manager, and Service Chiefs involved; an index of the drawings; and "key" drawing. General notes and other pertinent items will be provided by the A/E on the cover sheet.

3.6.3 The A/E will utilize copies of the VA AutoCAD As-Built Plans as listed in the Engineering Service AutoCAD Guideline Index. The A/E may utilize copies of the VA Record Drawings as listed in the Engineering Service Record Drawing Listing.

3.6.4 The A/E will follow the Engineering Service AutoCAD Guidelines in the development of the Project Construction Drawing Documents, Record Drawing Documents and As-Built modifications. In particular, the following sections apply:

- Section B: Engineering Service AutoCAD Project Requirements for Architects/Engineers.

- Section C: Group No. 1 Plotting Configurations
- Section E: Plot Configuration Parameters (PCP).

4) DESIGN ELEMENTS OF SPECIFIC CONCERN include:

- 4.1) **ARCHITECTURAL DESIGN:** The primary intent is to install Life Safety Branch, provide normal power to ICU, replace deficient electrical 2HE1 panel in ICU, Replace Motor Control Centers, install transfer switches and expand electrical/IT closets to address clearance requirements. Any systems affected in scope renovation will be considered in the phase requirements, including but not limited to: HVAC, plumbing, telecom, cable, nurse call, life safety and exiting, electrical power (both normal and emergency), lighting, data, cable, signage etc. The approximate construction cost is \$2,000,000. This amount will be reduced by 25% due to SDVOSE
 - 4.2) **STRUCTURAL ENGINEERING** will be incidental to the A/E's design. There are existing seismic walls that could cause structural issues that would need to be resolved by this work.
 - 4.3) **HVAC DESIGN** for Electrical and IT Closets, evaluate state of existing HVAC for each based on heat/equipment load of each closet to determine if adequate.
 - 4.4) **PLUMBING DESIGN** will be an element in this work. **SPRINKLER SYSTEMS** will require alterations and upgrades to coincide with electrical/IT room expansion. All CPVC sprinkler piping shall be replaced possible with iron piping. Potable water and sewer systems may require alterations as interior walls are relocated, affecting plumbing risers
 - 4.5) **ELECTRICAL DESIGN** will require alterations and upgrades to meet current codes. It is part of the A/E's design. It is necessary to replace electrical panels and closets to meet NFPA 110. Also enlarge the telecommunication closets under this work. Fire Alarm systems require design to current criteria for VA life safety. Control system and/or motion sensors for lighting systems may need to be recommended and provided in the design.
 - 4.6) **EQUIPMENT.** Building service equipment (air handlers, etc.) is not known to be required under this contract.
 - 4.7) **COST ESTIMATING:** Detailed line item cost estimates showing materials and labor with appropriate markups for each shall be provided. The contractor's contingency, overhead, and profit shall be listed as separate items and not pro-rated into the line items. Subcontractor's markups may be handled as convenient. Appropriate mark-ups for set-asides need to be evaluated in the cost estimating process with consideration to any recommendations by VA engineering
- 5) **BIDDING AND NEGOTIATION** will be accomplished by the VAMC. The A/E shall be available to respond to questions concerning his design which evolve from this process at no additional cost to the government. Errors and omissions in the contract

documents identified during pricing and bidding shall be corrected at no additional cost to the government. Changes in scope requested by the government during bidding shall be subject to negotiation. The A/E shall provide the agreed upon number of reproduced plans and specifications to the VAMC for the VAMC's distribution and use. Electronic media may be required for the VA's use during bidding; this shall be established during negotiations and provided under this contract. All facets of the work shall be prepared to standards required for of competitive bidding where the bidders are not required to visit the site.

6) CONSTRUCTION PERIOD SERVICES.

6.1) FIELD SERVICES. Will be requested on an as-needed basis using a unit price established by mutual agreement during negotiations. The basis for the unit price will be Construction site visits and shall be based on monthly visits during the period of construction of 4 Hrs each. Additional 4 hr visit shall be allowed for a pre construction conference, punch list inspections, and final inspections. Each visit shall include preparation of field reports and related administrative activities. The 4 Hrs nominally includes local travel time to and from the site; travel costs in excess of this shall be factored into the final unit price during negotiations. It is suggested that the unit be per visit. Not all visits may be used; no compensation will be made for visits not used. Additional visits if required will be paid at the unit rate. Field Services may be requested for other than the evaluation of construction. Field Visit Services for construction shall consist of:

6.1.1) VERIFICATION OF DESIGN INTENT: assurance that all construction work complies with the designers' intent.

6.1.2) VERIFICATION OF POST CONSTRUCTION AS-BUILT CONDITIONS: The A/E shall review the contractors notes of changes in the field for accuracy and content and shall advise the VAMC of readily apparent problems, particularly with utility, wiring, piping, etc. The A/E shall assist the VAMC in maintaining a second record of field changes if it is felt the contractor's work is not sufficient.

6.1.3) PAY REQUESTS: The A/E shall assist the VAMC with the analysis of pay requests if requested by the VAMC. The VAMC will process and administer all payments to the contractor.

6.1.4) MEDIATION: The A/E shall provide a third party non-binding opinion in the event of minor disagreements between the contractor and the government. Serious disputes are addressed elsewhere in the A/E's contract.

6.1.5) CONTRACTOR'S REQUEST FOR INFORMATION AND COST PROPOSALS: The A/E shall review the Contractor's requests for information and cost proposals for construction change orders when requested by the Resident Engineer. The A/E reply regarding his review of cost proposals and his recommendations shall include an independent breakdown of costs in detail, quantities and unit prices and shall cover both additions and deductions of labor, materials and equipment.

6.2) OFFICE SERVICES. Submittal review services will be required to insure that submitted materials comply with the designer's intent. The VAMC will administer

the submittal reviews by collecting comments from VAMC staff, approve/disapprove submissions, and track submissions with the contractor.

7) POST CONSTRUCTION SERVICES

Requirements for Post-Construction Up-dating of the Medical Center's AutoCAD As-Built Drawings.

7.1) Record Drawings: The A/E following construction will review the notes kept by himself, the VAMC, and the contractor during construction and update the Construction Documents to reflect the work actually built. This shall be done in accordance with the policies, procedures, cited elsewhere in this attachment.

7.2) As-Built: The A/E, following construction and Record Drawing completion of the project, will up-date the Softdesk/AutoCAD As-Built to reflect all pertinent project modifications. The up-dating will consist of electronic data revisions and replotting onto Mylar in accordance with the **Engineering Service AutoCad Guidelines**.

a). Medical Center AutoCAD As-Built Plans affected by the project which will necessitate up-dating will be similar to the following except that that the drawings will consist of first floor "A" Wing drawings and may include quadrant plans of the pipe basement:

<u>TYPE OF AS-BUILT</u>	<u>.DWG FILE</u>
A. Architectural	all affected sheets
B. Telecommunication:	all affected sheets
C. Electrical:	all affected sheets
D. Fire Protection:	all affected sheets
E. Mechanical:	all affected sheets
F. Medical Gas:	all affected sheets
G. Plumbing:	all affected sheets
H. Roofing Plan:	all affected sheets
I. Civil Plan:	all affected sheets

7.3) Up-dating of VA As-Built drawings

- a) VA As-Built Drawing files will be modified by the A/E to update affected As-Builts with project modifications.
- b) The A/E will provide disks and the current applicable drawing files will be copied onto them by Engineering Service.
- c) The A/E will create the directories, as required, to maintain External Reference path integrity (i.e., without the project number) in compliance with the appropriate **Engineering Service AutoCAD Guidelines**.
- d) The A/E will modify the As-Built Drawings (as listed in 2. above) in compliance with the appropriate **Engineering Service AutoCAD Guidelines**.
- e) Modified As-Built drawing files will be returned to the Government in the same configuration as the A/E received them.

7.4) Plotting of VA As-Builts.

- a. The A/E, following up-dating of the VA Medical Center As-Builts as listed in XIII.B1.a, will plot the drawing files as listed below:

(1) Group No. 1

MEDIA: MYLAR

Size: 42"x30"

All As-Builts noted above

- 7.5) The A/E will create the plot files, for Group No. 1 plots, in accordance with Engineering Service AutoCAD Plotting Configuration Guidelines.

XII. Project Intent – The primary intent is to install Life Safety Branch, provide normal power to ICU, replace deficient electrical panel 2HE1 in ICU, Replace Motor Control Centers, install transfer switches and expand electrical/IT closets to address clearance requirements.

This project will replace outdated motor control centers, panels, automatic/manual transfer switches, enlarge remaining electrical closets, provide heating, ventilation, cooling for closets, separates life safety loads into their dedicated circuits/panels, provides additional panel support/loads into intensive care units.

All areas of the Medical center will remain in service during all phases of construction. The A/E (Architect/Engineer) process is divided into two contract portions: Design Development (DD) and Construction Documents (CD). The preliminary site survey work (such as verifying asbuilt drawings and analyzing utility systems) shall be accomplished in conjunction with design development. Design Development (DD) will involve feasibility studies, space and functional programming, project layouts, site analysis, assessment of utility systems and impact to

existing systems and medical center operations, infection control assessment during construction, detailed construction estimate, and construction schedule. Construction Documents (CD) will include site configurations and recommendations, structural requirements, utility modifications, VA accessibility requirements, patient and staff flow, finishes, safety code compliance, infection control assessment recommendations, signage and applicable design guides, scheduling, phasing, and specifications. Construction will be phased to minimize disruptions to the operations of the Medical Center. The design shall ensure compliance with current VA standards and all other applicable codes and criteria. Value engineering is encouraged and shall be noted at each design review. Submissions and estimates are expected at the DD1, DD2, CD1, and CD2 design stages

*** END ***